

# Trends in ICT electricity consumption

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Information and Communication Technology (ICT) devices and services are becoming more and more widespread in all aspects of human life. Following an increased worldwide focus on the environmental impacts of energy consumption in general, there is also a growing attention to the electricity consumption associated with ICT equipment.

In this study we assess how ICT electricity consumption in the use phase has evolved from 2007 to 2012 based on three main ICT categories: communication networks, personal computers, and data centers.

Our estimates show that the yearly growth of all three individual ICT categories (10%, 5%, and 4% respectively) is higher than the growth of worldwide human electricity consumption in the same time frame (3%). The relative share of this subset of ICT products and services in the total worldwide electricity consumption has increased from about 3.9% in 2007 to 4.6% in 2012.

We find that the absolute electricity consumption of each of the three categories is still roughly equal. This highlights the need for energy-efficiency research across all these domains, rather than focusing on a single one.